FIG. 1

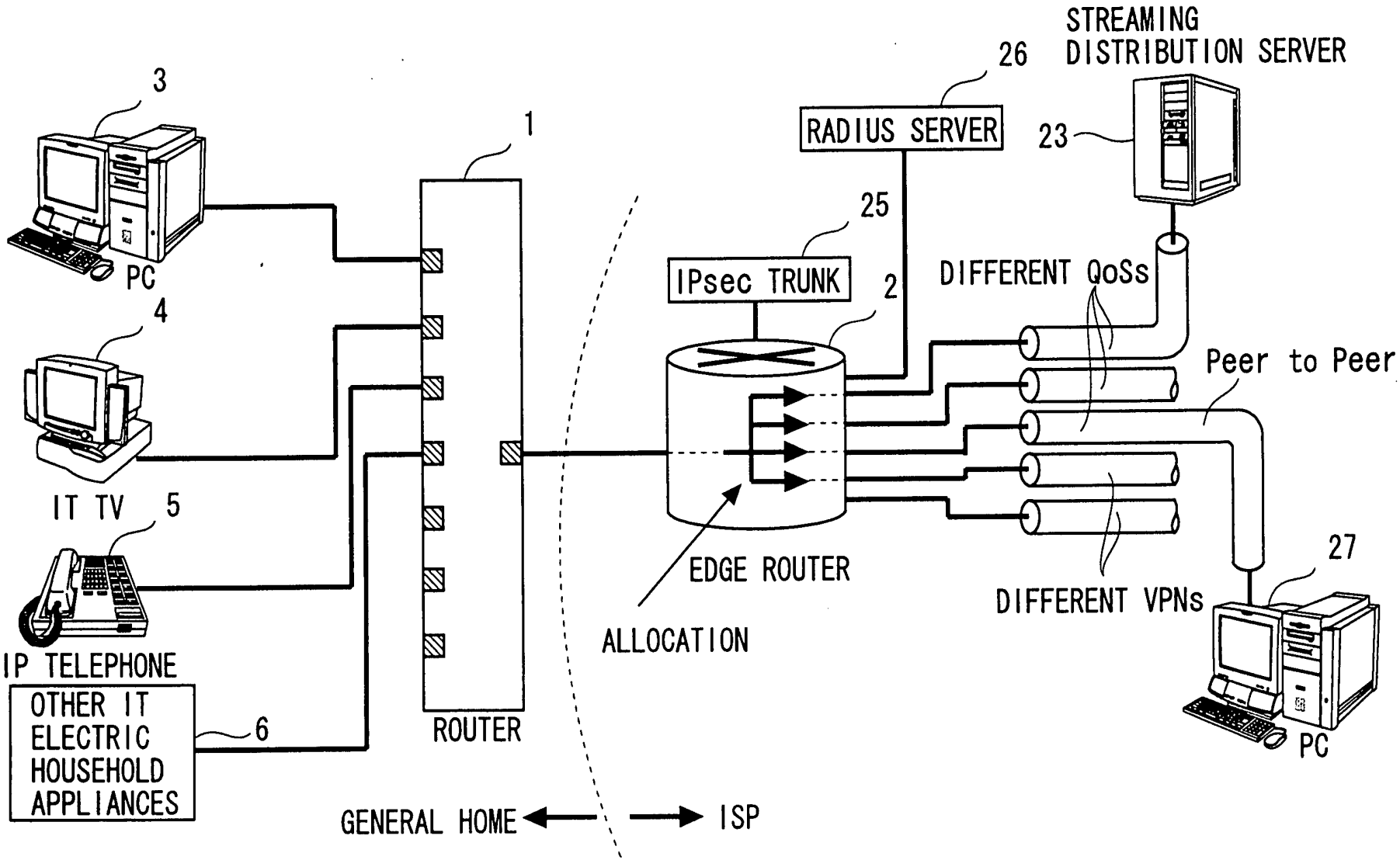

STREAMING
DISTRIBUTION SERVER
26
RADIUS SERVER
23
3
1
25
IPsec TRUNK
2
DIFFERENT QoSs
PC
4
Peer to Peer
IT TV
5
EDGE ROUTER
27
DIFFERENT VPNs
IP TELEPHONE
ALLOCATION
OTHER IT
ELECTRIC
HOUSEHOLD
APPLIANCES
6
ROUTER
PC
GENERAL HOME
ISP

FIG. 2

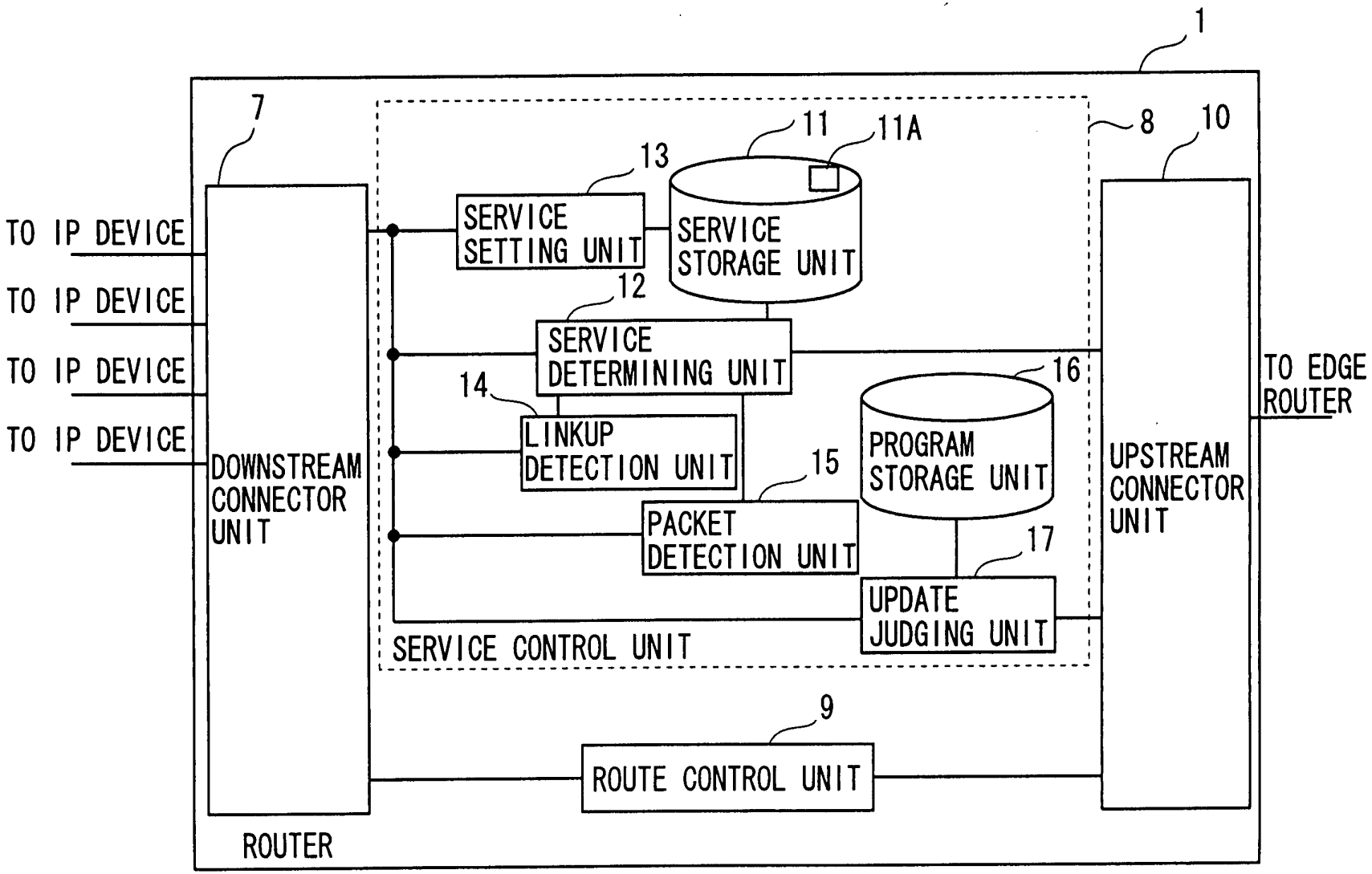

1
7
8
10
11
11A
13
12
14
16
15
17
TO IP DEVICE
TO IP DEVICE
TO IP DEVICE
TO IP DEVICE
DOWNSTREAM CONNECTOR UNIT
SERVICE SETTING UNIT
SERVICE STORAGE UNIT
SERVICE DETERMINING UNIT
LINKUP DETECTION UNIT
PROGRAM STORAGE UNIT
PACKET DETECTION UNIT
UPDATE JUDGING UNIT
SERVICE CONTROL UNIT
UPSTREAM CONNECTOR UNIT
TO EDGE ROUTER
9
ROUTE CONTROL UNIT
ROUTER

FIG. 3

11A

CONNECTOR NUMBER	SERVICE NAME	CONNECTION DETECTION MODE	USER ID	PASSWORD
1	BETST-EFFORT	PACKET		
2	FIXED BANDWIDTH ASSURANCE MULTICASTING	LINK		
3	VPN	PACKET	user1	1 2 3 4
⋮	⋮	⋮	⋮	⋮

FIG. 4

9A

POST-TRANSLATION PORT NUMBER	PRE-TRANSLATION PORT NUMBER	LOCAL IP ADDRESS
3001	2111	192.168.0.6
3002	2145	192.168.0.9
⋮	⋮	⋮

FIG. 5

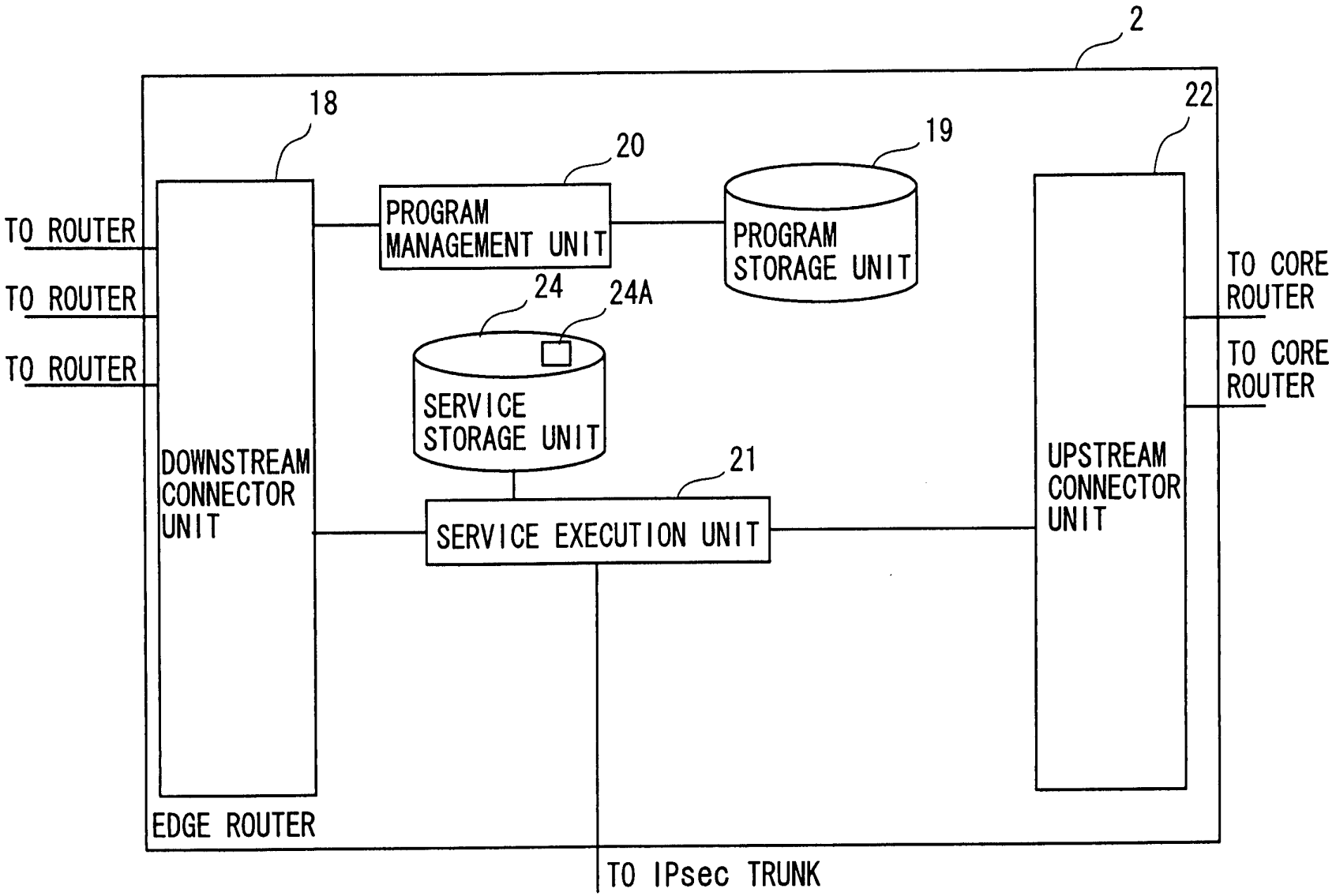

2
18
22
20
19
TO ROUTER
TO ROUTER
TO ROUTER
PROGRAM MANAGEMENT UNIT
PROGRAM STORAGE UNIT
24
24A
SERVICE STORAGE UNIT
TO CORE ROUTER
TO CORE ROUTER
DOWNSTREAM CONNECTOR UNIT
21
SERVICE EXECUTION UNIT
UPSTREAM CONNECTOR UNIT
EDGE ROUTER
TO IPsec TRUNK

FIG. 6

24A

SOURCE ADDRESS	SOURCE PORT NUMBER	SERVICE NAME
xxx. xxx. xxx. xxx	3001	BEST-EFFORT
yyy·yyy·yyy·yyy	4221	VPN
⋮	⋮	⋮

FIG. 7

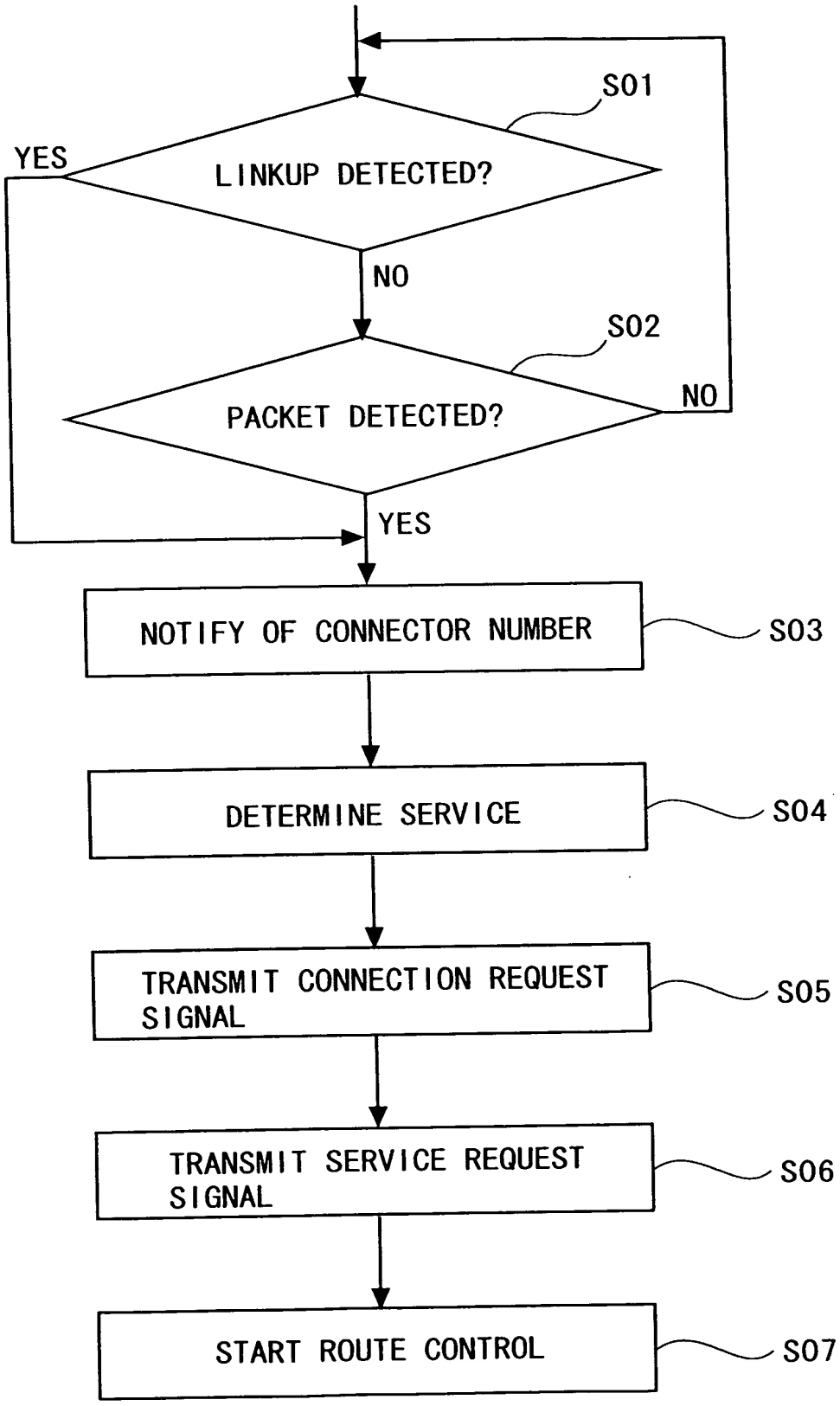
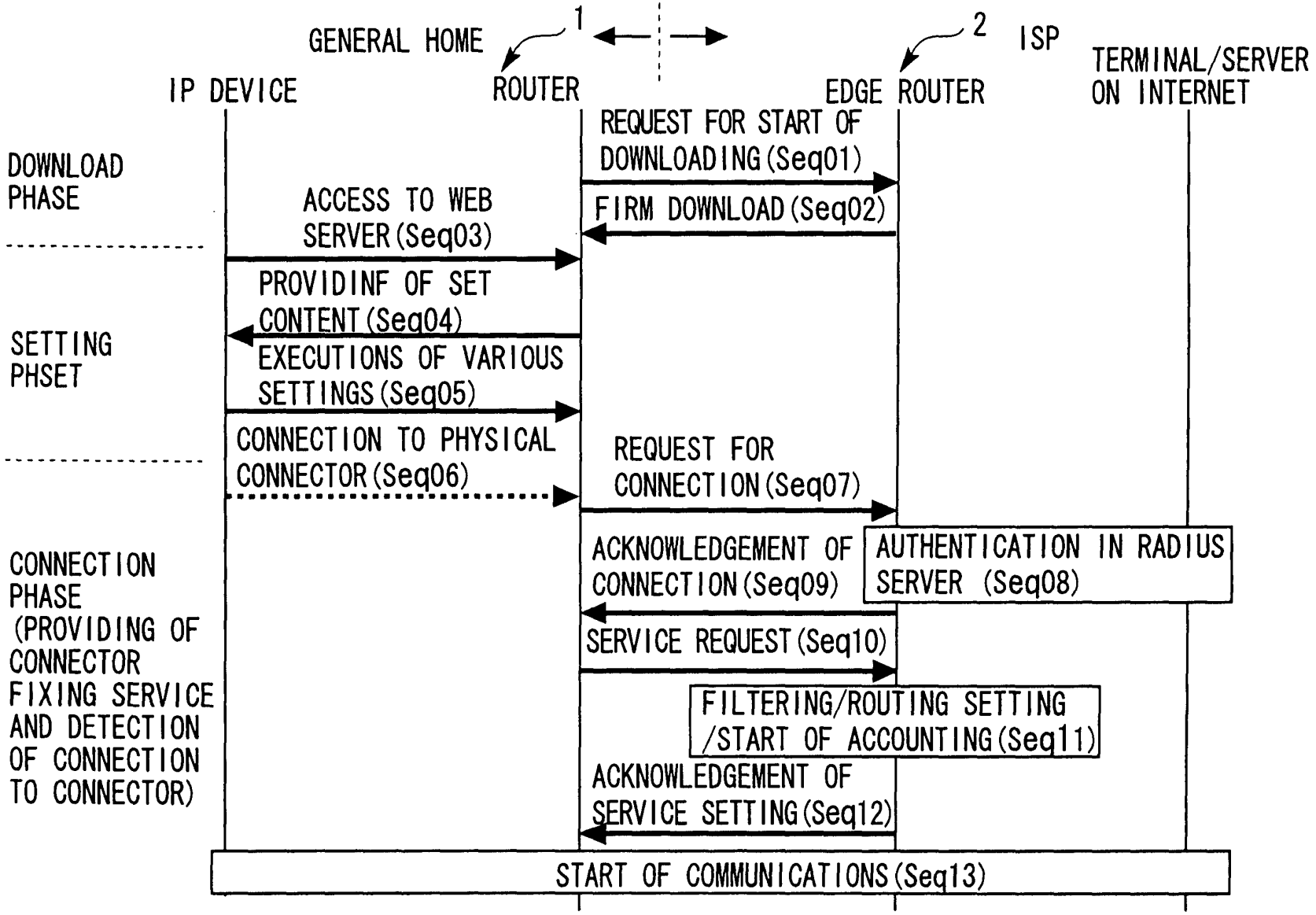

S01
LINKUP DETECTED?
YES
NO
S02
PACKET DETECTED?
NO
YES
NOTIFY OF CONNECTOR NUMBER
S03
DETERMINE SERVICE
S04
TRANSMIT CONNECTION REQUEST SIGNAL
S05
TRANSMIT SERVICE REQUEST SIGNAL
S06
START ROUTE CONTROL
S07

FIG. 8


GENERAL HOME
1
2
ISP
IP DEVICE
ROUTER
EDGE ROUTER
TERMINAL/SERVER ON INTERNET
DOWNLOAD PHASE
REQUEST FOR START OF DOWNLOADING (Seq01)
ACCESS TO WEB SERVER (Seq03)
FIRM DOWNLOAD (Seq02)
PROVIDINF OF SET CONTENT (Seq04)
SETTING PHSET
EXECUTIONS OF VARIOUS SETTINGS (Seq05)
CONNECTION TO PHYSICAL CONNECTOR (Seq06)
REQUEST FOR CONNECTION (Seq07)
CONNECTION PHASE (PROVIDING OF CONNECTOR FIXING SERVICE AND DETECTION OF CONNECTION TO CONNECTOR)
ACKNOWLEDGEMENT OF CONNECTION (Seq09)
AUTHENTICATION IN RADIUS SERVER (Seq08)
SERVICE REQUEST (Seq10)
FILTERING/ROUTING SETTING /START OF ACCOUNTING (Seq11)
ACKNOWLEDGEMENT OF SERVICE SETTING (Seq12)
START OF COMMUNICATIONS (Seq13)